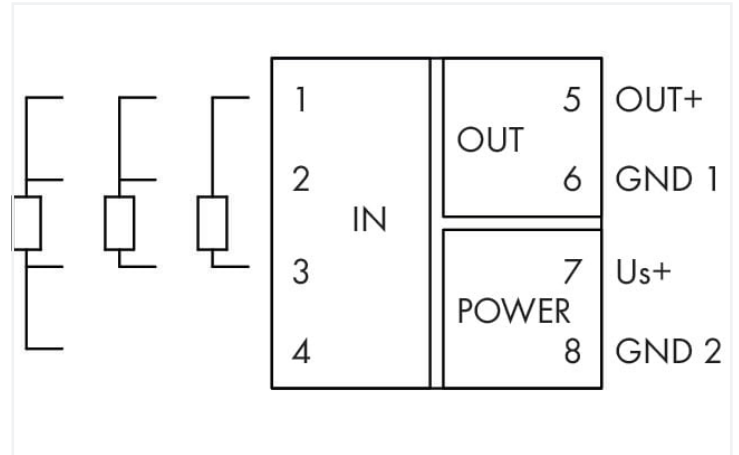
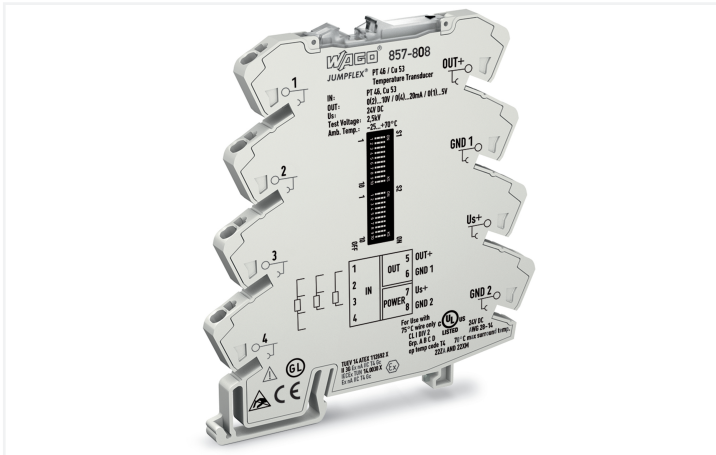


Data Sheet | Item Number: 857-808

Temperature signal conditioner for RTD sensors; Current and voltage output signal;

Supply voltage: 24 VDC; 6 mm module width

<https://www.wago.com/857-808>



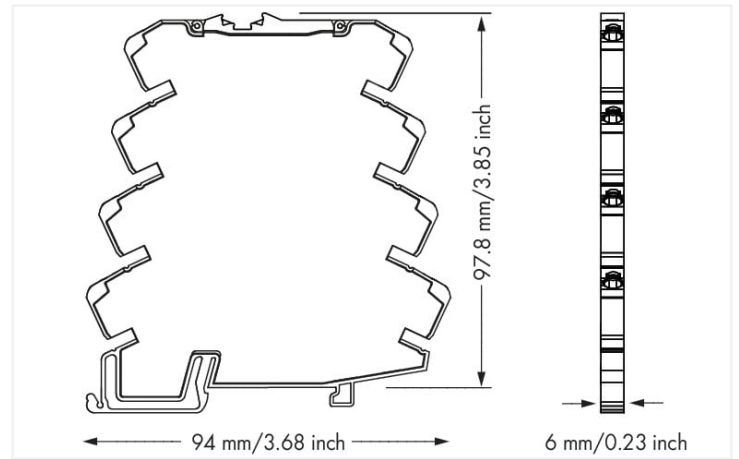
857-808
DIP Switch Adjustability

• = ON Default

DIP Switch S1		Wire Connection	Sensor Type	Output Signal	Measurement Range Underflow	Measurement Range Overflow	Wire Break	Short Circuit	
1	2	3	4	5	6	7	8	9	10
•	•	2-wire	Pt46	0...20 mA	Lower limit of output range - 5 %	Upper limit of output range + 2.5 %	Upper limit of output range + 5 %	Lower limit of output range - 2.5 %	
•	•	3-wire	Cu53	4...20 mA	Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	Lower limit of output range	
•	•	4-wire		0...10 mA	Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	Lower limit of output range	
				0...10 V	Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	Lower limit of output range	
				2...10 V	Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	Lower limit of output range	
				0...5 V	Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	Lower limit of output range	
				1...5 V	Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	Lower limit of output range	

DIP Switch S2		Start Temperature	End Temperature								
1	2	3	4	5	6	7	8	9	10	11	12
•	•	-200	-328	0	32	75	167	210	410		
•	•	-175	-283	5	41	85	185	230	428		
•	•	-150	-238	10	50	90	194	240	464		
•	•	-125	-193	15	59	95	203	250	482		
•	•	-100	-148	20	68	100	212	260	500		
•	•	-80	-130	25	77	110	220	270	518		
•	•	-60	-112	30	86	120	248	280	536		
•	•	-70	-94	35	95	130	266	290	554		
•	•	-60	-76	40	104	140	284	300	572		
•	•	-50	-58	45	113	150	302				
•	•	-40	-40	50	122	160	320				
•	•	-30	-22	55	131	170	338				
•	•	-20	-4	60	140	180	356				
•	•	-10	14	65	148	190	374				
•	•	0	32	70	158	200	392				

*acc to NAMUR NE 43



Dimensions in mm

Short description:

WAGO's temperature signal conditioner records signals from Pt46 and Cu53 sensors, converting a temperature signal into a standard analog signal at the output. **Features:**

- 2-, 3- and 4-wire connection technology
- Calibrated measurement range switching
- Detects a sensor wire break/short circuit
- Detects measurement range underflow/overflow
- Clipping capability for analog signal limitation to output end values
- 3-way electrical isolation with 2.5 kV test voltage

Technical data	
Configuration	
Configuration options	DIP switch
Input (RTD sensors)	
Sensor types (RTD)	Pt46 Cu53
Sensor connection	2-wire; 3-wire; 4-wire (switchable)
Sensor power supply (RTD) max.	≤ 0.5 mA
Temperature measurement range (RTD)	-200 ... 300 °C (Pt46); 0 ... 180 °C (Cu53)
Input	
Input signal type	Pt sensors Cu sensors
Input (RTD sensors)	
Measurement span (RTD) min.	50 K

Output (analog)

Output signal type	Current Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	$\geq 2 \text{ k}\Omega$
Load impedance (current output)	$\leq 600 \Omega$

Signal processing

Step response (typ.)	180 ms (2-wire); 360 ms (3-wire)
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Measurement error

Transmission error (typ.)	$\leq 0.1 \%$ at full measurement span
Transmission error for the set measurement range	$\leq ((10 \text{ K}/\text{set measurement range [K]} + 0.1) \%)$
Temperature coefficient	$\leq 0.02 \%/K$

Power supply

Power supply type	24 VDC
Nominal supply voltage U_S	DC 24 V
Supply voltage range	$\pm 30 \%$
Current consumption at nominal supply voltage	$\leq 40 \text{ mA}$

Safety and protection

Protection type	IP20
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Test voltage

Test voltage (input/output/supply)	AC 2.5 kV; 50 Hz; 1 min
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Connection data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches

Physical data

Width	6 mm / 0.236 inches
Height	94 mm / 3.701 inches
Depth from upper-edge of DIN-rail	97.8 mm / 3.85 inches

Mechanical data

Mounting type	DIN-35 rail
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Material data

Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.363 MJ
Weight	35.4 g

Environmental requirements

Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4
Standards/specifications	DNV

Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
eCl@ss 10.0	27-21-01-29
eCl@ss 9.0	27-21-01-29
ETIM 9.0	EC002919
ETIM 8.0	EC002919
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4050821468929
Customs tariff number	85437090300

Environmental Product Compliance

CAS-No.	1303-86-2 1317-36-8 7439-92-1 75980-60-8 79-94-7
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Diboron trioxide Lead Lead monoxide Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	2c1579c0-c6f4-474e-a7c7-caa710828ad3
SCIP notification number (Belgium)	f75ef945-81c3-417d-9f00-efd30c3fd9f1
SCIP notification number (Bulgaria)	0018f2cc-f61d-45d9-9c67-b40be6339a9d
SCIP notification number (Czech Republic)	34f39757-eea5-4d9d-9f10-9c3d4800de5f
SCIP notification number (Denmark)	9d762cdc-b416-4cf3-8c35-9d8afea75ea6
SCIP notification number (Finland)	8f318f07-fa79-4b58-8793-8ae11a876899
SCIP notification number (France)	2da53d2d-747c-4ccd-9419-29aff8ebaeaa
SCIP notification number (Germany)	0b2f4d0c-24ca-485c-86ff-aa24e3f1af27
SCIP notification number (Hungary)	4af08aee-d2b5-4a73-b4b7-46525f9de1f7
SCIP notification number (Italy)	e7fb06f4-4f09-4c7f-b3a8-52e2ab9f2ef0
SCIP notification number (Netherlands)	c7440523-ca83-4d45-bd29-68b1d1db048f
SCIP notification number (Poland)	aa442ccd-9d69-4fec-8d22-b68cccabf36d
SCIP notification number (Romania)	821241ef-4351-4814-8746-92fa9a8cd9c7
SCIP notification number (Sweden)	fcec4845-5efe-4681-87c2-8ed56a2c14fa

Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03081
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.4

Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications



Approval	Standard	Certificate Name
BV Bureau Veritas S.A.	Rules for class. of Steel Ships	40179_B0
DNV DNV Germany GmbH	DNV-CG-0339, Aug.2021	TAA00001D1

Approvals for hazardous areas



Approval	Standard	Certificate Name
CCC CNEX	CNCA-C23-01	2020312310000210 (Exec IIC T4 Gc)
IECEx TUEV Nord Cert GmbH	-	IECEx TUN14.0030X
UKEx WAGO GmbH & Co. KG	EN 60079-0	WAGO22UKEX004X
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 857-808	↓
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Documentation

Additional Information

Signal Conditioner	V 1.1.0 13.07.2020	pdf 1643.85 KB	↓
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Bid Text

857-808	19.02.2019	xml 5.68 KB	↓
857-808	20.02.2019	docx 17.41 KB	↓

Instruction Leaflet			
CCC Ex (Additional information)	26.04.2023	pdf 140.99 KB	

CAD/CAE-Data	
CAD data 2D/3D Models 857-808	CAE data EPLAN Data Portal 857-808 WSCAD Universe 857-808 ZUKEN Portal 857-808

1 Compatible Products

1.1 Optional Accessories

1.1.1 Installation

1.1.1.1 Mounting accessories



Item No.: 249-117
Screwless end stop; 10 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

Item No.: 249-197
Screwless end stop; 14 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

Item No.: 249-116
Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

1.1.2 Interface module

1.1.2.1 Interface adapters



Item No.: 857-980
Interface adapter; 16-pole; analog

1.1.3 Jumper

1.1.3.1 Jumper



Item No.: 281-482
Jumper; 2-way; insulated; gray

Item No.: 859-410/000-006
Jumper; for jumper slot; 10-way; insulated; blue

Item No.: 859-410
Jumper; for jumper slot; 10-way; insulated; light gray

Item No.: 859-410/000-005
Jumper; for jumper slot; 10-way; insulated; red



Item No.: 859-410/000-029
Jumper; for jumper slot; 10-way; insulated; yellow

Item No.: 859-402/000-006
Jumper; for jumper slot; 2-way; insulated; blue

Item No.: 859-402
Jumper; for jumper slot; 2-way; insulated; light gray

Item No.: 859-402/000-005
Jumper; for jumper slot; 2-way; insulated; red




























Item No.: 859-402/000-029
Jumper; for jumper slot; 2-way; insulated; yellow

Item No.: 859-403/000-006
Jumper; for jumper slot; 3-way; insulated; blue

Item No.: 859-403
Jumper; for jumper slot; 3-way; insulated; light gray










Item No.: 859-403/000-005
Jumper; for jumper slot; 3-way; insulated; red

1.1.3.1 Jumper

 <p>Item No.: 859-403/000-029 Jumper; for jumper slot; 3-way; insulated; yellow</p>	 <p>Item No.: 859-404/000-006 Jumper; for jumper slot; 4-way; insulated; blue</p>	 <p>Item No.: 859-404 Jumper; for jumper slot; 4-way; insulated; light gray</p>	 <p>Item No.: 859-404/000-005 Jumper; for jumper slot; 4-way; insulated; red</p>
 <p>Item No.: 859-404/000-029 Jumper; for jumper slot; 4-way; insulated; yellow</p>	 <p>Item No.: 859-405/000-006 Jumper; for jumper slot; 5-way; insulated; blue</p>	 <p>Item No.: 859-405 Jumper; for jumper slot; 5-way; insulated; light gray</p>	 <p>Item No.: 859-405/000-005 Jumper; for jumper slot; 5-way; insulated; red</p>
 <p>Item No.: 859-405/000-029 Jumper; for jumper slot; 5-way; insulated; yellow</p>	 <p>Item No.: 859-406/000-006 Jumper; for jumper slot; 6-way; insulated; blue</p>	 <p>Item No.: 859-406 Jumper; for jumper slot; 6-way; insulated; light gray</p>	 <p>Item No.: 859-406/000-005 Jumper; for jumper slot; 6-way; insulated; red</p>
 <p>Item No.: 859-406/000-029 Jumper; for jumper slot; 6-way; insulated; signal yellow</p>	 <p>Item No.: 859-407/000-006 Jumper; for jumper slot; 7-way; insulated; blue</p>	 <p>Item No.: 859-407 Jumper; for jumper slot; 7-way; insulated; light gray</p>	 <p>Item No.: 859-407/000-005 Jumper; for jumper slot; 7-way; insulated; red</p>
 <p>Item No.: 859-407/000-029 Jumper; for jumper slot; 7-way; insulated; yellow</p>	 <p>Item No.: 859-408/000-006 Jumper; for jumper slot; 8-way; insulated; blue</p>	 <p>Item No.: 859-408 Jumper; for jumper slot; 8-way; insulated; light gray</p>	 <p>Item No.: 859-408/000-005 Jumper; for jumper slot; 8-way; insulated; red</p>
 <p>Item No.: 859-408/000-029 Jumper; for jumper slot; 8-way; insulated; yellow</p>	 <p>Item No.: 859-409/000-006 Jumper; for jumper slot; 9-way; insulated; blue</p>	 <p>Item No.: 859-409 Jumper; for jumper slot; 9-way; insulated; light gray</p>	 <p>Item No.: 859-409/000-005 Jumper; for jumper slot; 9-way; insulated; red</p>
 <p>Item No.: 859-409/000-029 Jumper; for jumper slot; 9-way; insulated; yellow</p>			

1.1.4 Marking

1.1.4.1 Marker

 <p>Item No.: 793-5501 WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white</p>	 <p>Item No.: 793-502 WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white</p>	 <p>Item No.: 793-566 WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type; white</p>	 <p>Item No.: 793-503 WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; white</p>
 <p>Item No.: 793-504 WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; white</p>	 <p>Item No.: 793-505 WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type; white</p>	 <p>Item No.: 793-506 WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type; white</p>	 <p>Item No.: 793-501 WMB marking card; as card; not stretchable; plain; snap-on type; white</p>
 <p>Item No.: 2009-115 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white</p>			

1.1.4.2 Marking strip



Item No.: 2009-110

Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

1.1.5 Power supply

1.1.5.1 Power supply



Item No.: 787-2852

Switched-mode power supply; 1-phase; 24 VDC output voltage; 1 A output current

1.1.6 Terminal blocks

1.1.6.1 Supply module



Item No.: 857-979

Supply and through module

1.1.6.2 Through terminal block



Item No.: 857-979

Supply and through module

1.1.7 Tool

1.1.7.1 Operating tool

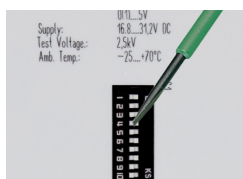


Item No.: 210-720

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

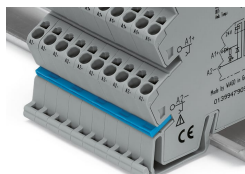
Installation Notes

Configuring



Configuration via DIP switch

Commoning



Commoning, not discrete wiring – Same outline allows use of a single in-line, push-in jumper.